

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
4 October 2001 (04.10.2001)

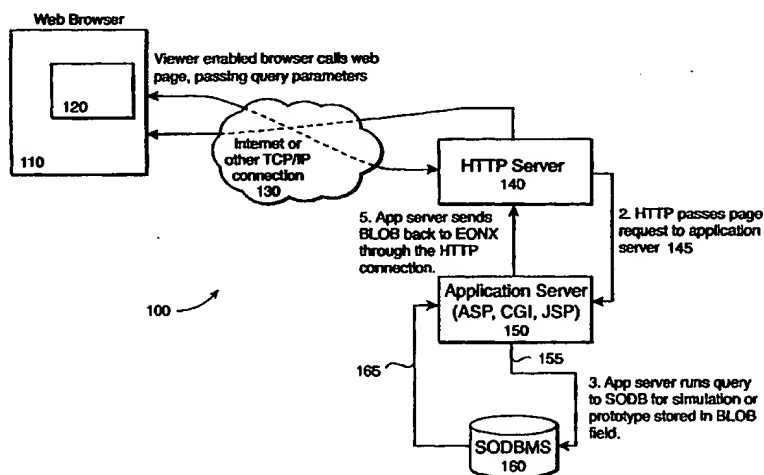
PCT

(10) International Publication Number  
**WO 01/73645 A1**

- (51) International Patent Classification<sup>7</sup>: **G06F 17/60**
- (21) International Application Number: **PCT/US01/10529**
- (22) International Filing Date: **28 March 2001 (28.03.2001)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:  
**09/537,584**      **28 March 2000 (28.03.2000)**      **US**
- (71) Applicant (for all designated States except US): **REALITYBUY.COM, INC.** [US/US]; Suite 150-A, 31 Technology Drive West, Irvine, CA 92618 (US).
- (71) Applicants and  
(72) Inventors: **LEJESKAR, Dan** [SE/US]; 9771 Briar Lane, Santa Ana, CA 92705 (US). **LAURITZEN, Christian** [SE/US]; 1525 Placentia, F-2, Newport Beach, CA 92663 (US). **JACOBSSON, Mikael** [SE/US]; 134 Lessay, Newport Coast, CA 92657 (US).
- (74) Agent: **MILLER, Scott, R.**; Riordan & McKinzie, 29th Floor, 300 South Grand Avenue, Los Angeles, CA 90071 (US).
- (81) Designated States (national): **AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.**
- (84) Designated States (regional): **ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).**
- Published:  
— with international search report  
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: **PROCUREMENT SYSTEM AND METHOD HAVING INTERACTIVE FUNCTIONALITY**



(57) Abstract: A procurement system and method having interactive functionality. The procurement system utilizes an interactive customer interface (110) that operates over a network (130), such as the Internet. The system requests certain information from a customer related to a product preference to determine the products to be presented. The system interactively presents simulation objects of components and products to the customer to provide interactive functionality. The simulation objects are manipulated by the customer to facilitate the customer's familiarity with the product, increasing customer connectivity with the products and thereby increasing online purchasing of products. The present invention provides the capability for dynamically configuring a product or linking the attributes of a product directly to a database (160). The present invention provides for the seamless integration of product visualization and interaction to the processing of transactions.

WO 01/73645 A1

WO 01/73645 A1



*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## **S P E C I F I C A T I O N**

This International application claims priority to United States application No. 09/537,584, filed March 28, 2000, and entitled, "Procurement System and Method Having Interactive Functionality." The disclosure of the foregoing is incorporated by reference herein as if set forth in full herein.

### **PROCUREMENT SYSTEM AND METHOD HAVING INTERACTIVE FUNCTIONALITY**

#### **BACKGROUND OF THE INVENTION**

##### **Field of Invention**

The present invention relates generally to a network-based procurement system, having customer input and interactive functionality, that increases customer connectivity by delivering the ability online to see components and products, interact with components and products, and ultimately purchase these components and products.

##### **Description of Prior Art**

Recently, there has been a push to move both the business (B2B) supply chain and the consumer (B2C) supply chain online -- over the Internet; both manufacturers and retailers are transforming their businesses with Web-enabled capabilities. This online procurement allows the streamlining of the procurement process. Manufacturers and retailers recognize that value can be created when online purchasing is used to reduce supply chain costs. To realize this value, in the online business-to-business (B2B) supply chain and in the business-to-consumer

(B2C) supply chain, it is necessary to optimize the procurement functionality between manufacturers and resellers, and between resellers and their buyers. To optimize the procurement process, increasing the efficiency of the customer's ability to select the products or components desired, and then effectively execute the order-to-delivery process is crucial.

While online purchasing permits the reduction in supply chain costs, this methodology has its shortcomings. Moving the purchasing function online often removes the ability of the customer to connect (i.e., associate) with the product. Having the ability to see a product and interact with that product before purchasing increases the association with the product – that is, it increases the connectivity between the customer and the seller's products. A high degree of connectivity is necessary to insure increased procurement by the customer. Numerous online systems are currently in use that provide for the expeditious requisition of products and components, and then facilitate payment and delivery. However, this online procurement methodology of the prior art does not provide for adequate customer connectivity. The standard Web interface – a product catalog of photographic images – remains a stumbling block to increasing the connectivity between the customer and the seller's product. No online procurement systems exist that provide the high degree of connectivity desired.

In recent years, businesses have endeavored to increase the procurement connectivity of their online catalogs. Various approaches have been widely used to deliver product information over the Internet. Sellers attempt to creatively display and describe their products to customers using their web pages. Manufacturers lay out and display product catalogs on web pages having content, such as text, pictures, sound and video. The technologies for delivery of product images in online catalogs employ images of photographs and artistic renderings (including those that are computer generated). These images are delivered to the customer as photographs, pictures, stitched 2D pictures where multiple images are used to deliver a

scrolling panorama, canned or streaming 2D media including video and canned or streaming 3D pictorial objects (e.g., stereographics). More recently, collections of photographic images are provided that permit the customer to view the product from different vantage points through photographic images taken from those vantage points.

For customer Internet access, catalog web pages are stored for later display on a web server that responds to Hypertext Transfer Protocol (HTTP). A catalog web page is accessed using a browser, e.g., Netscape® Communicator or Microsoft® Internet Explorer. In response to a customer query, a browser requests a catalog page from a web server using HTTP. The web server responds to the request by returning the catalog page using HTTP. The web page is typically encoded using HyperText Markup Language (HTML). The browser interprets the HTML to format and display the catalog pages.

A great variety of enhancements to HTML are available, and many of those implement the image deliveries previously discussed. An online catalog can use these enhancements by embedding in its HTML codes references to these enhanced image files. To correctly present these files and their enhanced interface, the browser must often be configured with an appropriate plug-in. When encountering an HTML enhancement for the first time, most modern browsers are configured to query the browser user if the download of an appropriate plug-in is desired. If directed to do so, the browser searches a master list of available plug-ins and begins a download. After successful download and installation of an appropriate plug-in, subsequent encounters with that type of HTML enhancement will be correctly rendered in the catalog page. Popular plug-ins include Adobe's Acrobat Reader® and Apple Computer's QuickTime® and QuickTime VR®. These enhanced image viewers permit the customer to view products and components according to the predetermined images provided. Customers may browse through a catalog to identify products of interest, to obtain specific product

information and to electronically purchase products after reviewing product information. Yet, there still is no interactivity between the product and the customer online; the ability to pick up, freely turn and manipulate a product is not possible.

In view of the foregoing, there is a need for an interactive procurement system and method that overcomes the deficiencies of the prior art.

#### SUMMARY OF THE INVENTION

The present invention provides a procurement system and method based on the use of 3D simulation objects. Simulation objects provide a 3D model of a product or component. Further, a simulation object can include codes for their own manipulation or interaction with other simulation objects. Simulation objects are typically rendered from polygons, textures, colors, rules of behavior (e.g., equations of motion, physically based modeling) and the like. A simulation object viewer is preferably configured as a plug-in for a browser. This allows a customer to orient and interact with simulation objects from within their browser, by using input devices such as a keypad, mouse, touch sensitive screen or other input device. Simulation objects can be moved and re-oriented with respect to the customer, or the objects can remain stationary and the customer can move around them. Simulation objects can be taken apart, or components can be added. Simulation objects can be manipulated. A close, intuitive relationship is created between the customer and the displayed simulation object because of the interactivity provided.

Use of simulation objects provides a method for exploring and examining objects and phenomena in a natural and intuitive way that exploits man's highly developed skills in visual recognition. 3D spatial processing capabilities are matched with the computer's representation of objects.

Use of the system and method of the present invention conveys to a customer a level of personal presence with a remote product. A visually-coupled system is created that presents the products alone, as part of other products, and/or in various real-world environments. Unique product offerings are showcased through visualization, configuration and selection. For many products, it is desirable to insure that the individual components of a product fit together, or interact in a manner to meet the customer's needs. A customer may need to identify a component within a product, and the attributes of that component. Dynamic computer graphic displays of simulation objects help with the understanding of how various parameters interact with each other. Provided is the ability for the customer to see the products, and interact with the products before the purchase. Thus, the present invention addresses the need for an interactive method for improving procurement connectivity and obtaining increased procurement functionality by providing a process for interactively displaying components and products for sale over the Internet.

A system and method for delivering purchasing information through a computer network such as over the Internet or the World Wide Web is provided. Customers can establish a bi-directional communication link, preferably log into the system, then browse among simulation objects of available components and products, interact with the components and products through the proxy of their simulation objects, and ultimately place an order online. The system merges interactive 3D simulation objects of the products with information about the products and creates a 3D viewable object for viewing and manipulating by the customer.

Simulation objects implemented in an online products catalog provides for extensive customer interaction with the products being offered. By making products and components available as simulation object representations, a higher-quality and more precise procurement evaluation of the products is possible. The object is manipulated independently, or as part of



a group of objects or components. This significantly enhances the customer's ability to understand the product information, to perceive the product, and to visualize the product or components.

A method for product procurement consistent with the present invention may be initiated by the requesting of information from a customer at a terminal connected to the Internet. The customer may provide the information requested through a remote server maintained by a merchant. The customer is logged in to a web page that is the starting point for each session. The customer is provided with an interface from which all the major functions of the merchant's system can be reached. From the interface the customer may select various components and products of interest to the customer. The customer's selection information is processed by the merchant's server.

In the present invention, the simulation objects of component and product are preferably stored as data in a database and provided on demand, online to the customer. Typically, a relational database is used. The online system interfaces with the database to access, transfer and display product information. A database management system (DBMS) is used to build the database and to operate on data within the database. The DBMS stores, retrieves and modifies data associated with the database.

Simulation objects of components and products from the database include update dynamics to provide that the changes of the properties (position, orientation, configuration, etc.) of the objects appear to the customer to be in real-time (i.e., the behaviors of the simulation objects appear realistic). In addition, audio feedback may also be provided.

The customer receives fully interactive and configurable simulation objects depicting the components or products. In addition, the customer may be provided with a hybrid of traditional images enhanced by simulation objects. Various points within or behaviors of the

simulation objects may be linked to sound or video. Once the viewer has manipulated the product and component images, he or she may select to purchase it. The customer then provides the information necessary to process the transaction.

In another embodiment of the present invention, a single server is provided that implements multiple, online catalogs that appear discrete. The server communicates bi-directionally with customers, and to and from it information flows for products from more than one merchant. Requests for product viewing are associated with a particular merchant based upon the online storefront visited by a customer, or upon the credentials presented by a merchant. Requests result in merchant specific product information being presented.

The present invention facilitates customer/seller interaction and customer connectivity.

#### BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings, which are incorporated in and constitute a part of the specification, illustrate presently preferred embodiments of the invention and, together with the preceding general description and the following detailed description, explain the principles of the invention.

In the drawings:

FIGURE 1 is a retrieval process diagram of a procurement system and method implemented over the Internet consistent with the present invention;

FIGURE 2 is an exemplary database table containing data representative of simulation objects used to implement a procurement system and method consistent with the present invention;

FIGURE 3 is a flowchart for a prior art procurement system;

FIGURE 4 is a flowchart of a method of procurement of products consistent with the present invention;

FIGURE 5 is a flowchart of another method of procurement of products consistent with the present invention;

FIGURE 6 is a flowchart of an alternative method of procurement of products consistent with the present invention;

FIGURE 7 is a data flow diagram for providing product data and simulation objects to and from a multiple customer and non-customer user procurement system and method consistent with the present invention;

FIGURE 8 is an example of a functional diagram of one system architecture for a procurement system and method consistent with the present invention;

FIGURE 8A is an example of a functional diagram demonstrating the scalability of the system architecture for a procurement system shown in FIGURE 8;

FIGURE 9 is a flowchart for a multiple customer and non-customer user procurement system and method consistent with the present invention;

FIGURE 10 is a graphical user interface consistent with the present invention;

FIGURE 11 is a graphical user interface highlighting the log-in location for a customer to access the procurement system of the present invention;

FIGURE 12 is a graphical user interface consistent with the present invention highlighting the log-in area and the feature area;

FIGURE 13 is a graphical user interface consistent with the present invention denoting the location of the customer interface to begin the procurement process;

FIGURE 14 is a graphical user interface consistent with the present invention denoting the location of the customer drop down boxes for a customer to select the type of products to be viewed and for which information is to be obtained;

FIGURE 15 is a graphical user interface consistent with the present invention presenting the requested simulation objects, product information and purchase order area;

FIGURE 16 is a graphical user interface consistent with the present invention highlighting the requested simulation objects and product information, and the purchase order area;

FIGURE 17 is a graphical user interface consistent with the present invention presenting the requested simulation objects, product information and purchase order area, and further highlighting add-on components for a product;

FIGURE 18 is a graphical user interface consistent with the present invention presenting the requested simulation objects, product information and purchase order area, and further having an add-on component added to the product and depicted as a simulation object;

FIGURE 19 is a graphical user interface consistent with the present invention having a drop down box for a customer to select additional products to be viewed and purchased and for which product information and simulation objects may be obtained.

#### DETAILED DESCRIPTION OF THE INVENTION

Embodiments consistent with the present invention address the need for increased customer connectivity by providing a 3D interactive procurement system and method. The procurement system and method described herein may be implemented over a variety of platforms, including wide area networks (WANs), local area networks (LANs), or CD-ROMs. Nevertheless, for purposes of setting forth the preferred embodiment of the present invention, the system and method of the present invention is described with regard to the Internet.

Figure 1 is a diagram of a procurement system 100 having interactive functionality implemented over the Internet consistent with a preferred embodiment of the present invention. Procurement system 100 includes a customer terminal 110, a web browser 120, an Internet 130,

a HTTP server 140, an application server 150, and a Simulation Object Database Management System (SODBMS) 160 including a Simulation Object Databas (not shown). Alternatively, HTTP Server 140 and application server 150 may be combined as a single server. One skilled in the art will recognize that the procurement system 100 may include more or less components depending on the desired customer environment. For example, procurement system 100 may include additional servers for handling a high volume of customers. Moreover, procurement system 100 may operate as a store-front having multiple servers and multiple merchants. The HTTP server 140 may also act as a store front and communicate directly with merchants who maintain their storefront on the application server 150 over Internet 130 or via another communication channel (not shown).

Customer terminal 110 is preferably a stand-alone computer terminal that is configured to communicate over Internet 130 (e.g., using Terminal Control Protocol/Internet Protocol, that is, TCP/IP). To facilitate this operation, customer terminal 110 includes components typical to an Internet-ready computer terminal, such as a processor, memory, input/output terminals, client software (e.g., web browser 120), and modem (or similar communication device). Web browser 120 is capable of displaying and manipulating simulation objects. This capability may be an inherent feature, such as is found in EON Reality Viewer, Macromedia Flash, and/or Panoramic Environment Viewers, or this capability may be supplied by a plug in as common for plug ins used by Microsoft® Internet Explorer® and Netscape Communicator®. The viewer enabled web browser 120 communicates with the web page and the database storing the simulation objects.

When a customer first directs his web browser 120 to a merchant web site that employs simulation objects, the web browser 120 will detect that the needed plug in (or viewer) must be downloaded (this is standard browser functionality). The customer can choose to download

the recommended plug in, which is ordinarily downloaded, installed and loaded dynamically, and is thus in a few moments ready to display simulation objects. In subsequent visits to this or other websites employing simulation objects of the same type, no further plug in downloads will be required: the plug in software is already present and ready to operate.

Once equipped with the simulation object plug in, a web browser 120 requests and receives simulation objects. Simulation objects are customized, configurable entities. They are displayed and manipulated via the web browser plug in. When these configuration choices are made.

The integration of the simulation objects with the components of a web centric procurement system creates the improved connectivity procurement environment. Allowing the customer to choose components, configure components, and through their virtual experience gain enough familiarity with the product or components to enable a purchase decision.

Upon execution of the web browser 120, a customer can access HTTP server 140 over Internet 130 by inputting the appropriate uniform resource locator (URL) into the web browser 120 (e.g., "www.realitybuy.com"). Alternatively, web browser 120 may be preconfigured with one or more URLs so that a URL may be selected by a customer rather than entered.

HTTP server 140 is preferably a computer dedicated to communication with the customer for implementing the procurement system consistent with the present invention in response to external requests from customer terminal 110. HTTP server 140 receives a call for a web page by the web browser 120, which passes the HTTP server 140 the query parameters. The query parameters from the web browser 120 include an embedded reference for a simulation object 200, which is sent as a secondary request to the application server 150 for the simulation object. The HTTP server 140 receives the query parameters and passes a web page request 145 to application server 150. The application server 150 queries the Simulation

Object Database Management System (SODBMS) 160 for the simulation (not shown). The type of application server is not critical; it may be based on ASP, JSP, CGI or any other process capable of querying the SODBMS 160. The simulation object 200 may be stored within the SODBMS in a Binary Large Object Field (BLOB) 165.

The HTTP server receives the secondary request and preferably sends it to an application server for processing. The application server then runs the query through the SODBMS, and retrieves the simulation object data as a BLOB (Binary Large Object) field from the database. Alternatively, a table is returned containing data representing multiple simulation objects.

In Figure 2 there is shown a sample of a BLOB 165 containing the simulation object 200. A typical BLOB 165 containing a simulation object 200 (not shown) will provide the field type, and the field description. Thus, a simulation object 200 is stored dynamically, rather than statically as a photograph or still image of a product would be stored. The simulation object 200 is linked to a product database containing information about the products and components. As components of a simulation object 200 are changed by the customer, the view of the simulation object 200 dynamically changes for the customer. As the dynamic changing of components of a simulation object 200 create different products, the product identification number, typically a SKU may be identified by a query to the product database, from the product information stored in the product database, and information about product availability provided to the customer. If product information for a particular product configuration does not exist in the product database, a new product identification number may be generated and added to the product database, or the new product configuration may be provided to the customer as a list of component parts. Figure 2 is a sample a table of simulation object data in the SODBMS. For an actual catalog, the table would commonly contain hundreds of rows, and for many

purposes may contain more than tens of thousands (e.g. the number of spare parts carried by a automobile manufacturer or an appliance repair service).

Referring again to Figure 1, the SODBMS 160 returns BLOB 165 to the application server 150. The application server 150 then passes the BLOB 165 back to the web browser 120; the resultant simulation object data is then returned to the customer's browser via the HTTP connection already open. The web browser 120 sends the BLOB imbedded in and HTML document to the customer terminal 110 from the HTTP server 140 over the Internet 120. The customer then views the simulation object 200 at the customer terminal 110.

In Figure 3 there is shown a flowchart for a prior art online procurement method. To use a prior art method, a customer first accesses a merchant website hosted by a server (Step 300). Upon accessing the merchant website, the customer may conduct a search for products and product information (Step 305). The customer may scroll through the topics of products that he wishes to view. Upon receipt of the customer's selection, the customer's inputs are used to select appropriate product and/or product areas. The customer then views the products and product information selected (Step 310). After viewing the products and product information, the customer may decide to purchase the product (Step 315). If no decision is made to purchase, the customer may start from the beginning (Step 300), continue by beginning a new search (Step 305), reviewing the results of his present search (Step 310), or simply return to the home page, or the customer may log off.

In Figure 4 there is shown a flowchart for a method of implementing procurement system 100. To use the system of the present invention, a customer first accesses a merchant website with a web browser 120 configured with a viewer to view simulation objects 200 (Step 400). Upon accessing the merchant website, the customer may conduct a search for products and product information (Step 405). The customer may scroll through the topics of products



that he wishes to view. The customer may then select the product or product areas that he desires. Preferably, the customer's selection from the procurement system 100 is made rapidly accessible by allowing the customer to type the first few letters of a product or product area. Alternatively, products and/or product areas may be presented hierarchically, whereby a customer would first select a category (*e.g.*, automobiles) from among a short list of categories. An embodiment may use a search engine, where keywords entered limit the list to selections containing at least a majority of the keywords. Selection strategies such as these and others will be well known to those skilled in the art. Upon receipt of the customer's selection, the customer's inputs are used to select appropriate product and/or product areas. One skilled in the art will recognize that the procurement system 100 may be configured to output any combination of data relating to products and/or product areas. The customer then views the products and product information selected, with the products launched as simulation objects (Step 410). Product selection and simulation object launch may be a single step, or may be a series of steps. In Figure 4, it is represented as a single Step 410.

With the product information and simulation objects, a customer may be provided with both general information and details about a particular product. When viewing the product, the customer will typically receive a description of the product, and be able to view the product as a simulation object. Product availability, and other information such as price, weight, shipping information, etc. may also be provided.

With products and components configured as simulation objects 200, the customer will be able to look at the product in more detail. The customer will be able to interact with the product as if were in front of him or her (Step 415). There will be the ability to look at the product from a 3D aspect, being able to rotate, examine and try the functionality. For example, a customer may be able to open and close a car door, adjust the seat, and open the trunk.

Alternatively, products may also be provided as 2D or 3D images having components within these images configured as simulation objects. After interacting with the products and viewing product information, the customer may decide to purchase the product (Step 420). When purchasing, the customer will specify shipping requirements, such as ship date, ship to, bill to, etc. Quantities may be adjusted here, should the customer desire to determine any price reduction based on quantity purchases. An order is then placed, and the purchase goes through a transaction handling process.

If no decision is made to purchase, the customer may continue (Step 425) by starting from the beginning (Step 400), continue by beginning a new search (Step 405), reviewing the results of his present search (Step 410), or simply return to the home page, or the customer may log off. Alternatively, there may be provided the further option of saving the product information and simulation objects viewed for later review. Later viewing off line may be accomplished by saving the product information and simulation objects in the web browser's cache.

In Figure 5 there is shown a flowchart for an alternative method of implementing procurement system 100. The procurement system 100 of Figure 5 is similar to that of Figure 4. A customer first accesses a merchant website with a web browser 120 configured with a viewer to view simulation objects 200 (Step 500). Upon accessing the merchant website, the customer may conduct a search for products and product information (Step 505). The customer then views the products and product information selected, with the products launched as simulation objects (Step 510).

With products and components configured as simulation objects 200, the customer will be able to look at the product in more detail. The customer will be able to interact with the product as if were in front of him or her (Step 515). There will be the ability to look at the

product from a 3D aspect, being able to rotate, examine and try the functionality. After interacting with a product, the customer may decide to select other related products or components to add to the product. This may entail changing the color, size, quantity, etc. For example, a customer may select a product such as a car to be presented as a simulation object. The customer may then add an after market product such as a bike rack to a car. The customer may attached the bike rack, put a bike in it, and then remove it from the car. This process of configuring a final product based on trying various products and components and then making a selection is Step 525. The customer may decide to purchase the configured product (Step 530). If the product that is configured corresponds to a particular product number, that product number is noted as the purchased product. If the product that is configured has not been assigned a particular product number, then the newly configured product may be assigned a product number, or, alternatively, the product may be purchased as a bill of materials listing its components.

If no decision is made to purchase, the customer may continue (Step 535) by starting from the beginning (Step 500), continue by beginning a new search (Step 505), reviewing the results of his present search (Step 510), or simply return to the home page, or the customer may log off. Alternatively, there may be provided the further option of saving the product information and simulation objects viewed for later review. Later viewing off line may be accomplished by saving the product information and simulation objects in the web browser's cache.

In Figure 6 there is shown a flowchart for an alternative method of implementing procurement system 100. The procurement system 100 of Figure is similar to that of Figs. 4 and 5. A customer first accesses a merchant website with a web browser 120 configured with a viewer to view simulation objects 200 (Step 600). Upon accessing the merchant website, the

customer may conduct a search for products and product information (Step 605). In the procurement system shown in Figure 6, the customer knows information about a component part of a particular product, and desires to obtain more information about the component part. The customer may generally know the product, but may not know, for example, the name of the part, or how that part fits together with the other components to make the product. The customer desires this information, and may, or may not want to purchase the component part. As before, the customer views the products and product information selected, with the products launched as simulation objects (Step 610).

With products and components configured as simulation objects 200, the customer will be able to look at the product in more detail (Step 615). The customer is able to take apart the product to ascertain the component part of interest (Step 620). For example, the customer may remove the body of a car represented as a simulation object to view the exhaust system. The customer may then pull apart the exhaust system to identify a particular component part of the exhaust system.

This process of finding a component part based on trying various products manipulating the component parts is Step 625. The customer may decide to purchase the configured product (Step 630).

If no decision is made to purchase, the customer may continue (Step 635) by starting from the beginning (Step 600), continue by beginning a new search (Step 605), reviewing the results of his present search (Step 610), or simply return to the home page, or the customer may log off. Alternatively, there may be provided the further option of saving the product information and simulation objects viewed for later review. Later viewing off line may be accomplished by saving the product information and simulation objects in the web browser's cache.

The procurement system 100 of the present invention may be used in an online marketplace environment. Figure 7 provides the data flow for product data and simulation objects to and from procurement system 100 for a multiple merchant environment. Simulation object developers 700 generate simulation objects of products and components that are uploaded through a database upload application 705 to a simulation object database 715 having a SODMS 160. Product information for the products and components is supplied (and updated) by the merchants 710. Product information is uploaded through a database upload application 705 to a product database 720. An online multiple merchant marketplace 725 is provided. The digital marketplace is a fully integrated commerce platform for providing multiple merchant product information and procurement capabilities. Core transactions and interface provide the entire procurement process, including, for example, product catalog and search engines, real-time tracking and receiving, routing and approval. Typical graphical user interfaces (GUIs) are provided as well as management of the interfacing of multiple customers with multiple merchants. The online multiple merchant marketplace 725 may be implemented using TRADEX® Commerce Center software by Ariba, or the like.

The online multiple merchant marketplace 725 shown in Figure 7 provides marketplace web pages 730 for customers. Access to these web pages 730 is either direct, or may be through links from the web pages 745 of other sites. Once the online multiple merchant marketplace 725 is accessed, customers are provided with product information from the product database 720 and simulation objects 200 as more fully described with reference to Figures 4 through 6. Non-customer users of the simulation objects 200 may be provided with direct access to the SODMS 160 and simulation database 715.

In Figure 8 there is shown an architecture diagram of a typical implementation of the procurement system 100 of the present invention in a multiple merchant marketplace

environment. The multiple merchant marketplace environment may be implemented using an application server 800, providing interoperability and coordination between the various elements of a procurement system 100, such as shipping, purchasing, accounting, inventory control, etc. The application server may be a Java based application server, but any comparable application server may also be used. If the application server 800 is a Java based application server, it may include several Java classes which are called as and when required to perform specialized set of operations. The functional modules of the procurement system 100 may be implemented using these Java classes or comparable classes of another application. For example, a class or collection of classes may implement product customization, while another implements the ordering process. Subsystems that are a part of the application server 800 may be preferably designed as Java Beans, but those skilled in the art may find other architectural choices better fit their particular circumstances.

The application server 800 as shown in Figure 8 provides connectivity to the product database server 805 for the online multiple merchant marketplace. A database connection 820 is shown between the application server 800, and in Figure 8 the database connection 820 is a Java database connection (JDC). The database server typically contains the product information and functions necessary for implementation of the related online multiple merchant marketplace 725 shown in Figure 7. A database implementation such as a SQL relational database, provided by various vendors, for example, Oracle 8i may be used for the database server 805 or for the simulation object database server 810, or both. Using a JDC for the database connection 820 for implementation, and using an amount of parameterization provides for future migration, if desired, to other Java based database configurations. The SODBMS 160 may be implemented on a simulation engine 815 using a Java application. Typical hardware for

application server 800 or simulation engine 815 may be a Sun Solaris® or Weblogic® Application Server.

The application server 800 may provide for the determination of the location of a particular simulation object 200 located in the simulation object database server 810 through an API 825 that may be a Java API. Enterprise Java Beans (EJB) 830 may be used to provide the product information to the HTTP server 140. The HTTP server 140 is designated as a Netscape Directory Server 835 or equivalent. Simulation objects 200 are received from the simulation objects engine 815, and product information is received from the application server 800. The simulation objects 200 and product information are linked and transmitted by the HTTP server 140 to the customer. Because Java is a platform independent language, for the present invention, the system architecture may alternatively be configured so a Java based application server 800 could possibly interact with external Java based management information systems/enterprise resource planning systems (MIS/ERP systems). For other non-Java based MIS/ERP, most ERP/MIS system have available support and interfaces for Java. In the absence of such a availability, the application server 800 would need to make connections to these resources using interoperability technologies such as CORBA (common object request broker architecture) or COM+.

The procurement system 100 of the present invention may also include dynamic loading of files from an Internet URL or compatible file.

A secure socket layer (SSL) and firewall 850 may be used to provide access control and content security for the procurement system 100. As the data exchanged in the procurement system 100 may be commercially sensitive, the system architecture may be SSL secured with server and client authentication. This would imply that only authorized/identified customers would be allowed access. The client identification/authentication may be implemented using

client certificates; the customers' operations such as issuing quotes, discounts orders etc. will be traced back to the customer. The server certificate facilitates encryption of the transferred data (and its subsequent decryption at the receiving end), so that a secure network is realized comprising of all the participants of the online multiple merchant marketplace environment.

In Figure 8A, it is noted that the system architecture of Figure 8 provides system scalability. Scalability is necessary to maintain procurement system functionality and efficiency as the number of merchants and customers participating in the multiple merchant marketplace increases. Thus, with the procurement system 100 of the present invention, the data that is required appears seamlessly obtained. Further, a cluster of geographically distributed resources (e.g., server hardware) may be efficiently utilized in a manner transparent to the customer.

In another embodiment of the present invention shown in Figure 9, non-customer users are provided with an access system 900 having web-based front ends to view and try products and components. Various classes of non-customer users may include, but are not limited to, those responsible for shipping (who make sure products get shipped, or make sure catalog represents current shipping costs), buyers (who check inventory levels for reorders, monitor for popular/unpopular products, or place orders with other entities), a merchants employees, etc.

Each class will have differing demands and will interact with various kinds of resources to conduct their commerce operations.

For only viewing and trying a product, browser 920 is an augmentation of a web browser 120, or, alternatively another web-based front end may be implemented with special code to display and manipulate simulation objects. In addition to a plug in, an Active X Control, JAVA Applet, or other relatively portable, easily integrated module may be used. The web browser 920 makes HTTP requests to the web server (not shown), but the result is a



corresponding web page retrieved and processed by the application server (not shown). The application server makes the necessary connections to the SODMS, or to an external resource like an MIS/ERP system for performing any operations as required by the customers. Non-customer user operations on these pages are again conveyed using the HTTP protocol to the web server, and in turn to the application server. The application server receives these events and performs the requisite 'event-processing' and returns results to the customers, as appropriate. After retrieving the data from these resources, and performing the necessary processing on them, the page sent to the customers' browser for display. This type of integration to other commerce oriented back-end systems is well known in the art. Particularly unique to the present invention is the enhancement to the activity provided by the presence of simulation objects representative of the products.

FIGURE 10 is a graphical user interface (GUI) 1000 for using the multiple merchant marketplace environment consistent with the present invention. GUI 1000 is an example of a multiple merchant marketplace home page. GUI 1000 may be generated on the screen of customer terminal 110 remotely (*e.g.*, HTTP server 140). The customer interacts with procurement system 100 through GUI 1000. One skilled in the art will recognize that GUIs described herein represent just one example of a user interface for procurement system 100. Other GUIs representing different methods consistent with the present invention may also be displayed to a customer.

GUI 1000 first requests the customer to enter identification information. As shown in Figure 11, GUI 1000 in the log in area 1105, information such as a name and password may be requested. (Plugs in or viewers may be downloaded previously from an introduction page (not shown).) GUI 1000 may be provided with enhancements such as a feature section 1205 highlighted in Figure 12 that features selected products and components. In Figure 13, entry

into the multiple merchant marketplace is effected by using the menu 1305 requiring the customer to choose from the predetermined criteria. Once the customer has made a selection, categories of available products may be available in drop down menus as shown in Figure 14. For example, in GUI 1000, the customer must select from a plurality of subject areas (Step 1405). The drop down menus of GUI 1000 shown in Figure 14 request information pertaining to products, products areas, particular merchants, etc. Each product area includes a drop down menu for selection of a product type within the product area (Step 1410). Each product type includes a drop down menu for selection of product listings (Step 1415). Product listing may also be displayed according to availability according to country, or some other identified criteria.

The GUI 1000 provides that a customer may select to review information about a particular product and one or more components of that product at the same time. For example, in Figure 15, the customer has requested information about a Jeep® Grand Cherokee®. GUI 1500 of the present invention provides for the customer to see a Jeep® Grand Cherokee® and several after market parts. In addition, the customer may search through component parts of a product or view component part of that product. A simulation object 1505 of a Jeep® Grand Cherokee® is provided for the customer to interact with the product. The customer may view the simulation object 1500, and manipulate and interact with the simulation object 1505 using an input device to manipulate the simulation object 1505. Various component parts of the simulation object 1505 may also be viewed by, for example, removing the body of the simulation object 1505 (not shown).

If the customer desires to purchase the product, the customer is prompted to input product information (Step 1605) into the product selection fields 1610 as shown in Figure 16. The merchant information is may also be requested using pop-up menus or other means known

in the art. After entering product selection information into GUI 1500, the customer can continue to view and interact with other products and components, and add those selected to the product information fields 1610. For example, in Figure 17, the customer has selected to view a component part 1705 -- a wheel. In Figure 18 the component part 1705 is featured. The component part 1705 is shown as an image, and the wheels of the simulation object 1505 have been replaced with component part 1705 creating new simulation object 1805.

If the customer desires to purchase the product depicted as new simulation object 1805, the customer is prompted to input product information (Step 1605) into the product selection fields 1610 as shown in Figure 18. The customer may then continue to view and interact with other products and components, and add those selected to the product information fields 1610. Alternatively, the customer may select another product area, product type or product (Step 1905) as shown in Figure 19, and continue the procurement process of the present invention. The customer may configure, re-configure by, for example, adding or subtracting components) any product or components desired. When the customer has completed the information requested in the purchase fields, the purchase order would be routed through the fulfillment process. The fulfillment process typically would include a confirmation of the customer's order, confirmation of availability, shipping and fulfillment and online billing.

While only some embodiments consistent with the present invention have been described, those skilled in the art will understand that various changes and modifications may be made to these embodiments, and equivalents may be substituted for elements in these embodiments, without departing from the true scope of the invention.

In addition, many modifications may be made to adapt a particular element, technique or implementation to the teachings of the present invention without departing from the central scope of the invention. Therefore, this invention should not be limited to the particular

embodiments disclosed herein, but should include all embodiments falling within the scope of the appended claims.

The improved connectivity procurement process enables a customer to, over the Internet or in an application, view, examine, understand and even configure products. After this, the customer can proceed to buy the product with, if selected, the preferred configuration. The present invention provides the elements necessary to achieve integration and interoperability with external systems.

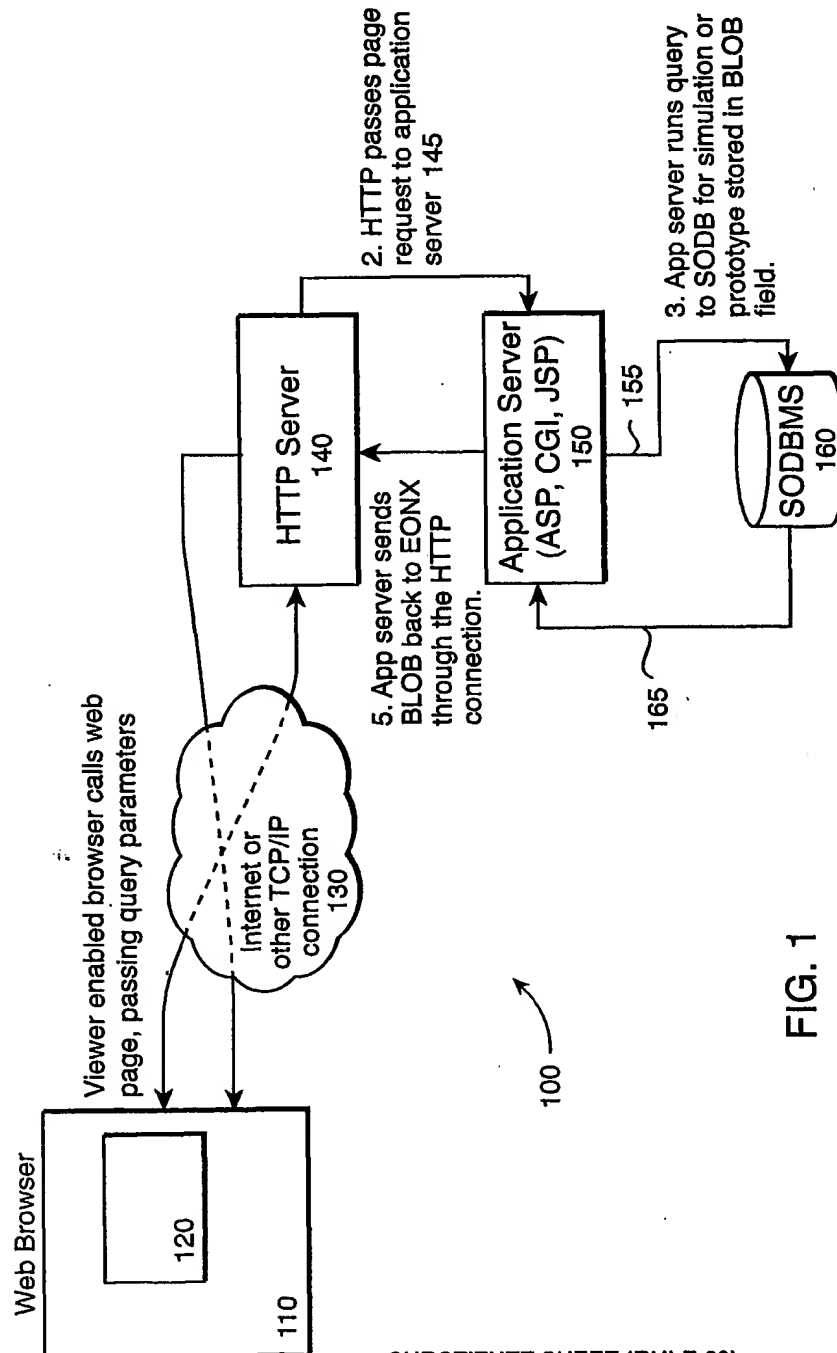
We claim:

1. A procurement system having interactive functionality, comprising:  
a customer terminal for exchanging product data with a product data storage device,  
said product data comprising at least one simulation object;  
said customer terminal capable of displaying said at least one simulation object for  
manipulating by a user of said customer terminal.
2. A procurement system as claimed in claim 1 where said product data storage device is  
a server.
3. A procurement system as claimed in claim 1 or in claim 2 wherein said customer  
terminal further comprises a system for placing and fulfilling product orders.
4. The system of claim 1, 2 or 3, wherein the communication between the catalog server  
and the customer terminal takes place over a network.
5. A procurement system having interactive functionality, comprising:  
means for storing a simulation object of a product;  
means for displaying said simulation object of a product; and,  
means for providing customer interaction with said simulation object when said  
simulation object is displayed.
6. The system of claim 5, wherein means for providing customer interaction with said  
simulation object when said simulation object is displayed takes place over a network.
7. A procurement system having interactive functionality, comprising:  
a customer terminal for exchanging product data with a product data storage device,  
said product data comprising at least one simulation object;  
said customer terminal capable of displaying said product data for manipulating said  
simulation object.

8. A procurement method having interactive functionality comprising the steps f:  
creating a simulation object of a product;  
displaying a simulation object of a product at customer terminal;  
providing for a customer to interact with said displayed simulation object at said customer terminal.
9. A procurement system having interactive functionality with a product, comprising:  
a customer terminal configured to exchange product data with a product data server;  
said product data server having product data including at least one simulation object,  
said product data server in communication with said customer terminal, and providing to said customer terminal said simulation object;  
whereby said customer terminal creates an interactively controllable display of said simulation object representative of said product.
10. A procurement system having interactive functionality with a product as claimed in claim 9, said customer terminal further capable of handling purchase request for said product.
11. A procurement system having interactive functionality, comprising:  
a customer terminal for exchanging product data with a product data storage device,  
said product data comprising at least one simulation object of a product and at least one simulation of a component related to said product;  
said customer terminal capable of displaying said at least one simulation object, and  
said customer terminal capable of displaying said at least one simulation object and at least one simulation of a component related to said product,  
for manipulating and configuring by a customer.

12. A procurement system as claimed in claims 9, 10 or 11, said product data further comprising an order form for said product.
13. A procurement method having interactive functionality comprising the steps of:  
creating a simulation object of a product;  
storing a simulation object of a product;  
displaying a simulation object of a product at customer terminal;  
providing for a customer to interact with said displayed simulation object at said customer terminal.
14. A method of providing an online merchant marketplace having procurement interactive functionality comprising the steps of:  
creating a web page capable for providing at least one product of a merchant available for purchasing from said web page;  
creating a simulation object of said at least one product for displaying and manipulating on said web page;  
providing for purchasing said product online at said web page.
15. A merchant marketplace having procurement interactive functionality comprising:  
an online catalog of product data for at least one product,  
said product data for at least one product including a simulation object of said product;  
a customer terminal for displaying and manipulating said at least one product.
16. A merchant marketplace having procurement interactive functionality as claimed on claim 15, further comprising an online purchasing of said product

1 / 19



SUBSTITUTE SHEET (RULE 26)



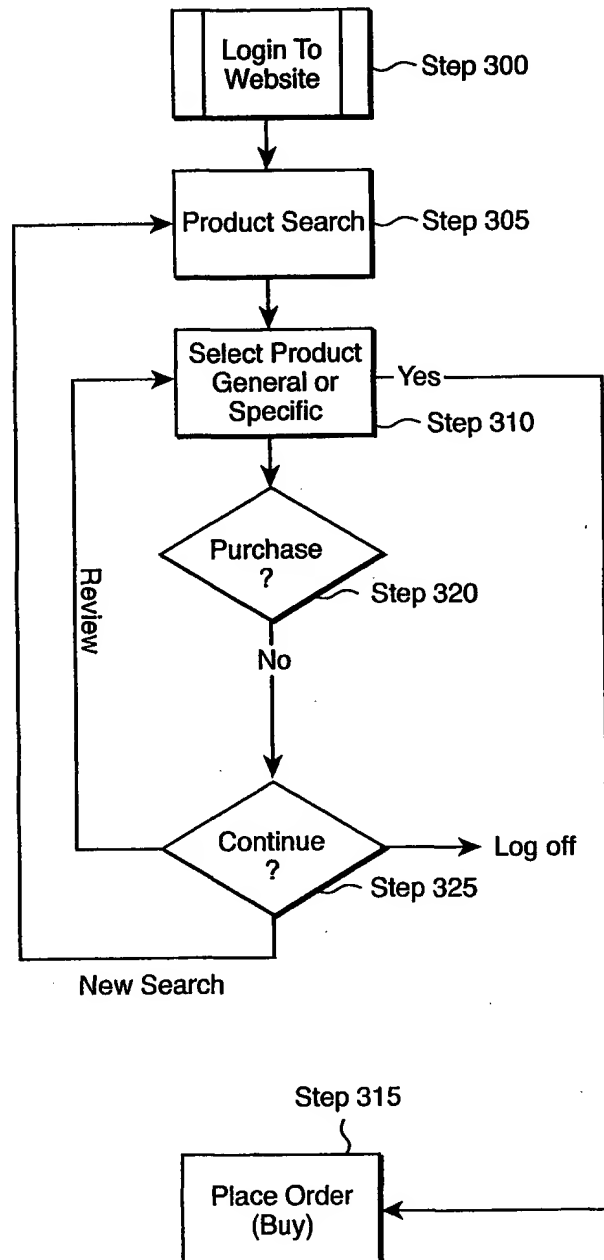
2 / 19

Field type	string	integer	BLOB	string	integer	string
Field desc.	Name	index	file contents	file type	part num.	description
sample entry	tire	0	(binary data)	EOP	45939	goodyear eagle tire
sample entry	engine	1	(binary data)	EOP	397291	chevrolet 350 v-8
sample entry	car	2	(binary data)	EOZ	93842	chevrolet camaro

Example of SODB Table containing Simulation Object

FIG. 2

3 / 19

**FIG. 3**  
PRIOR ART

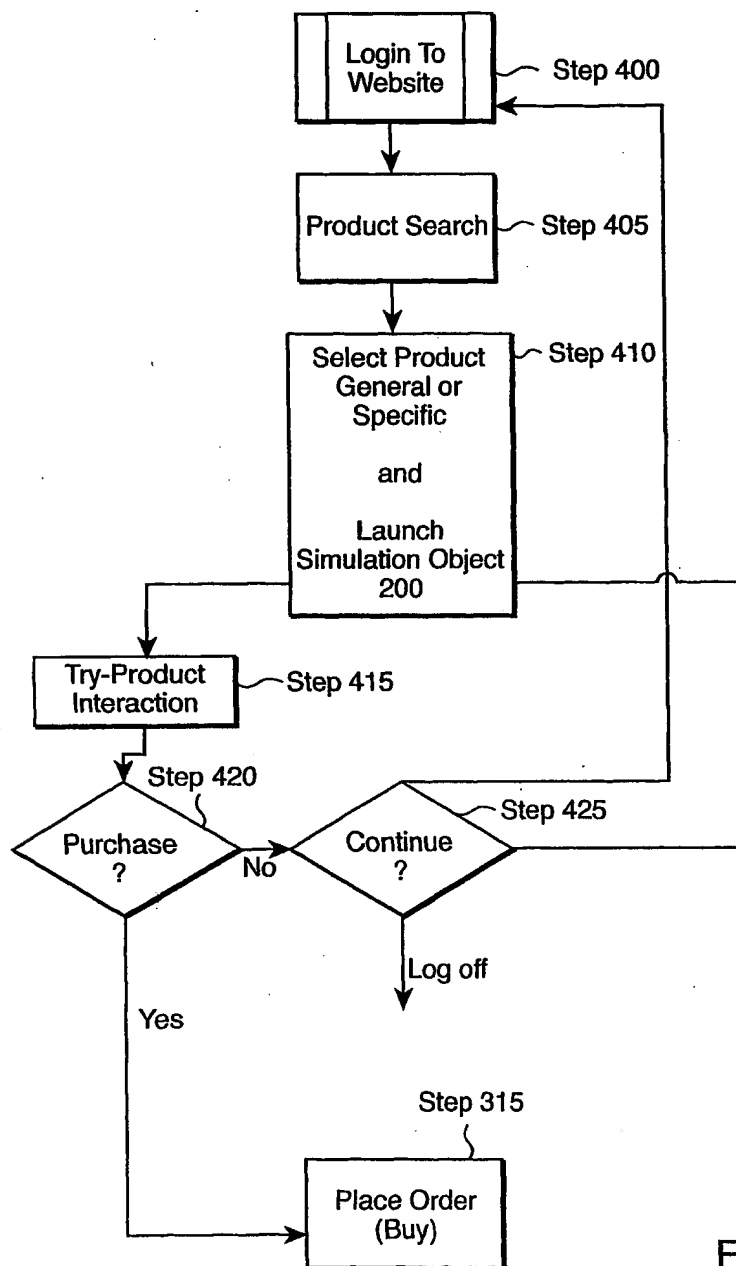


FIG. 4

7 / 19

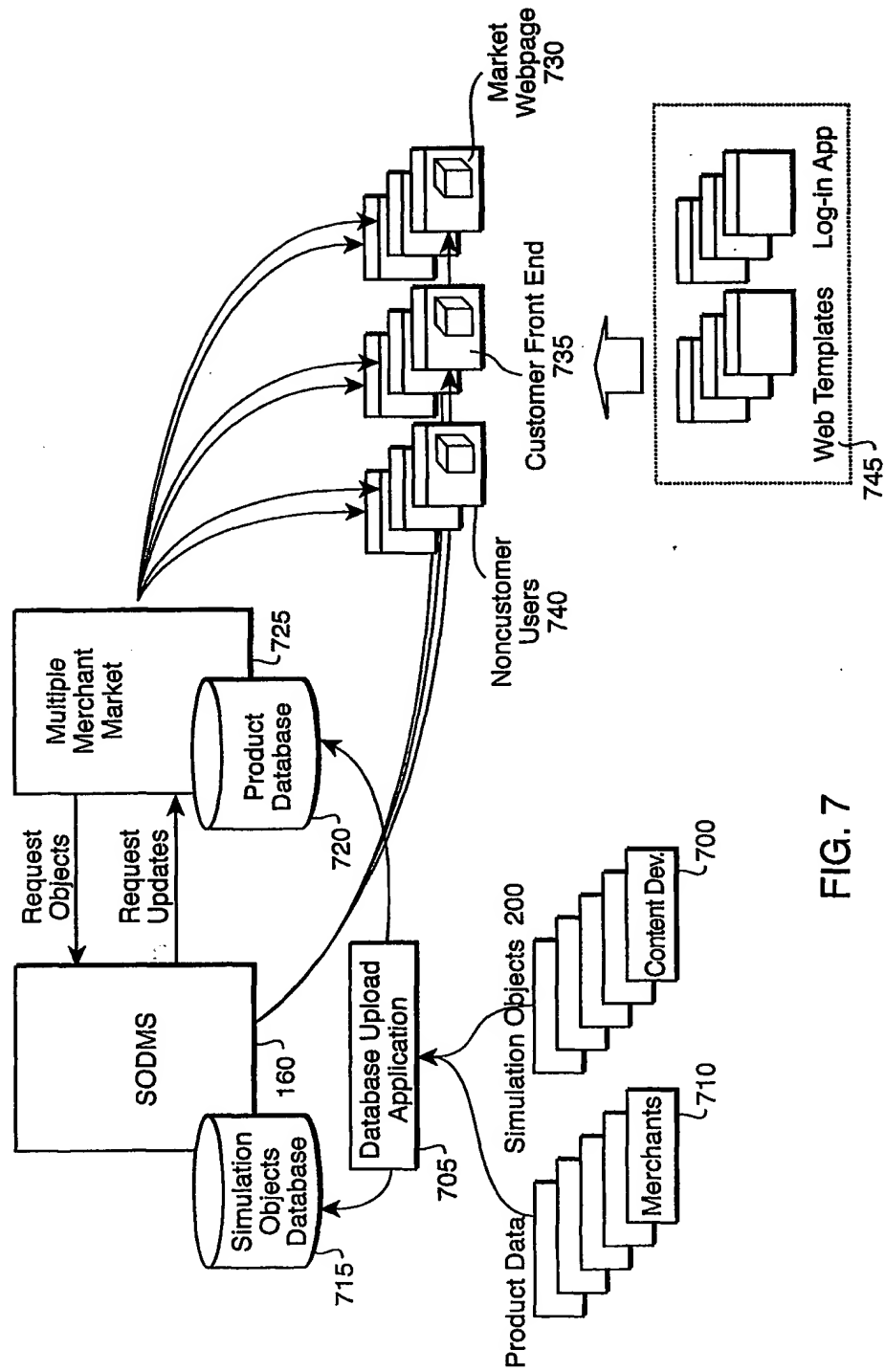


FIG. 7

5 / 19

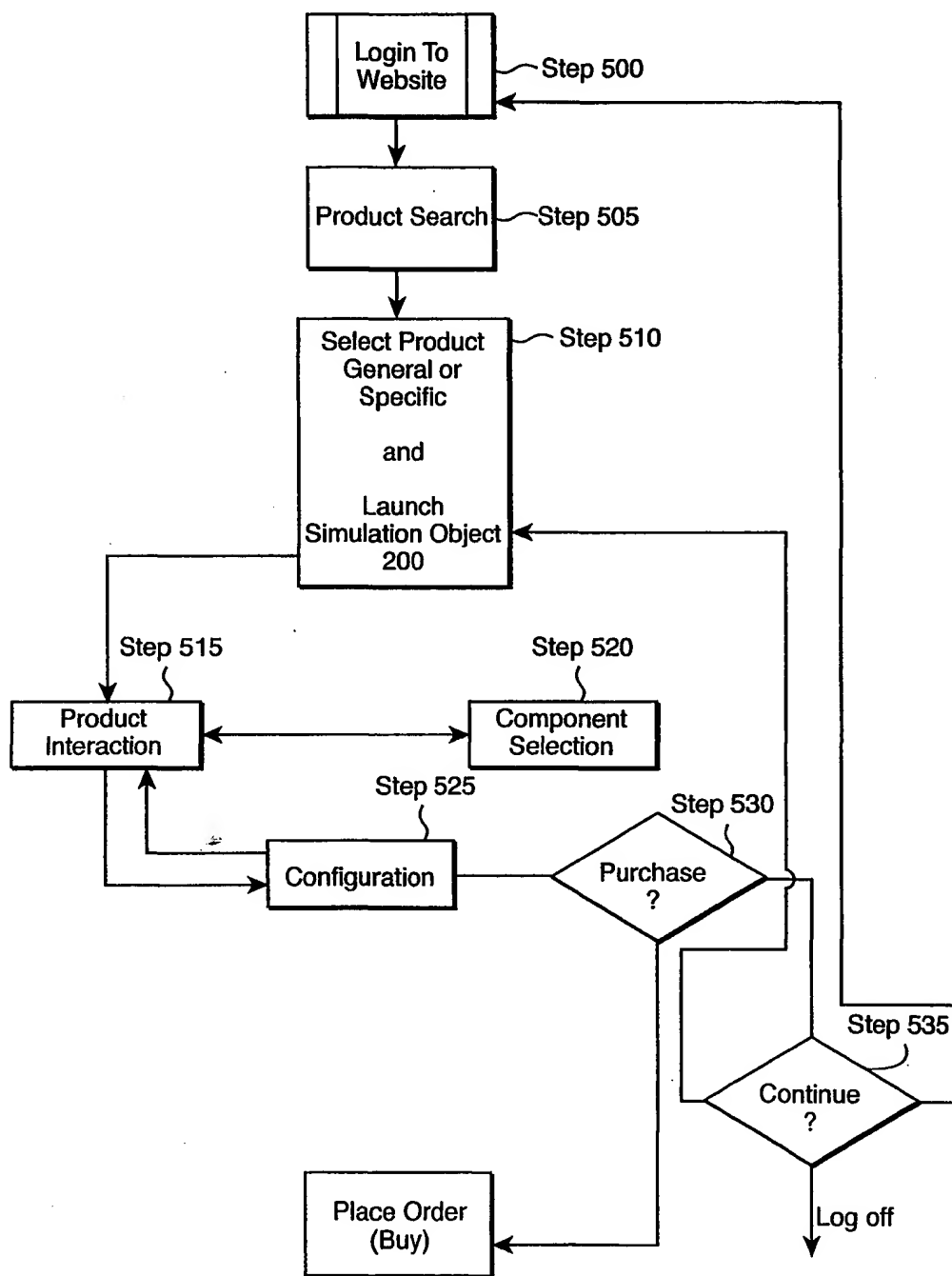


FIG. 5

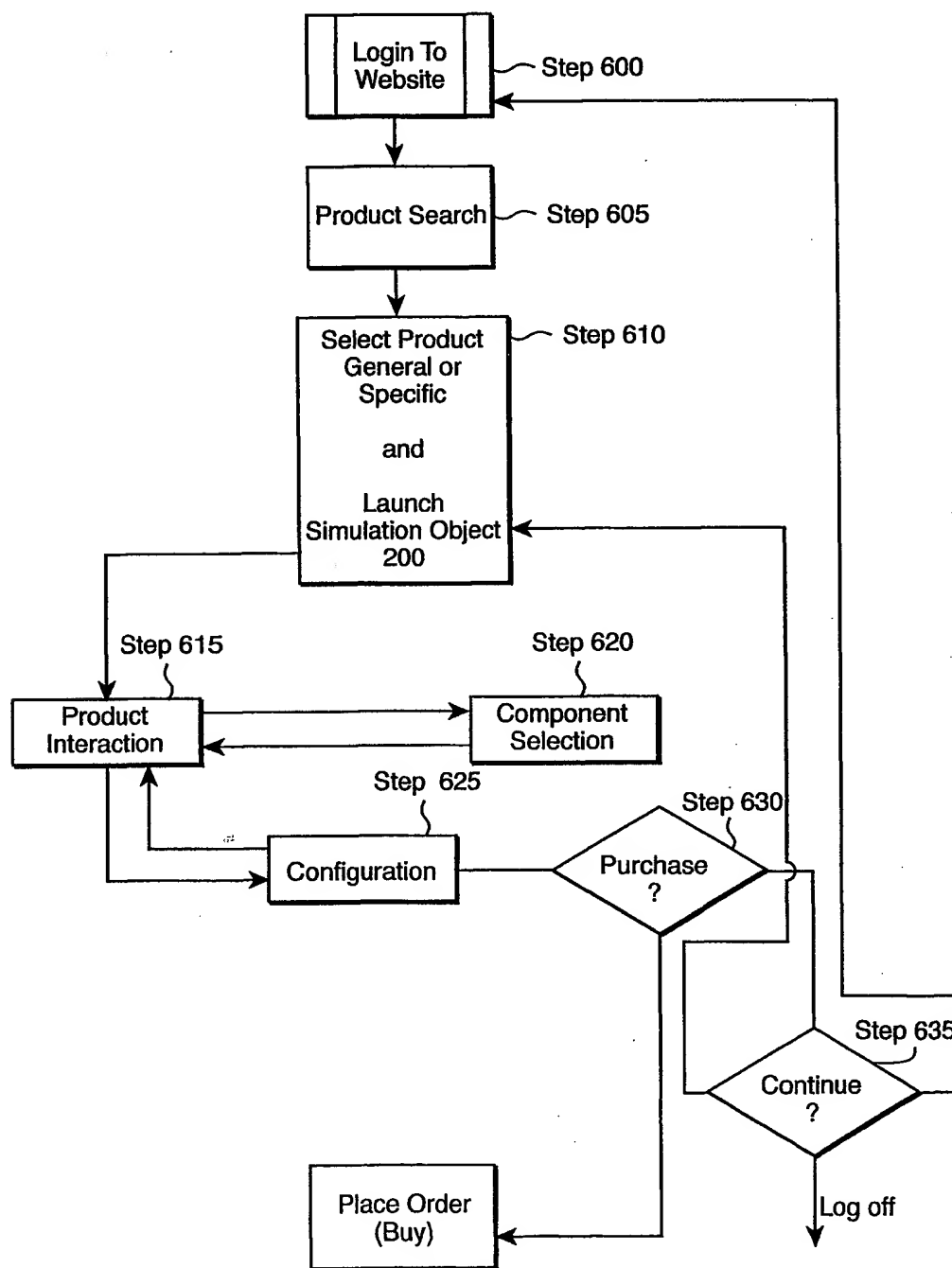
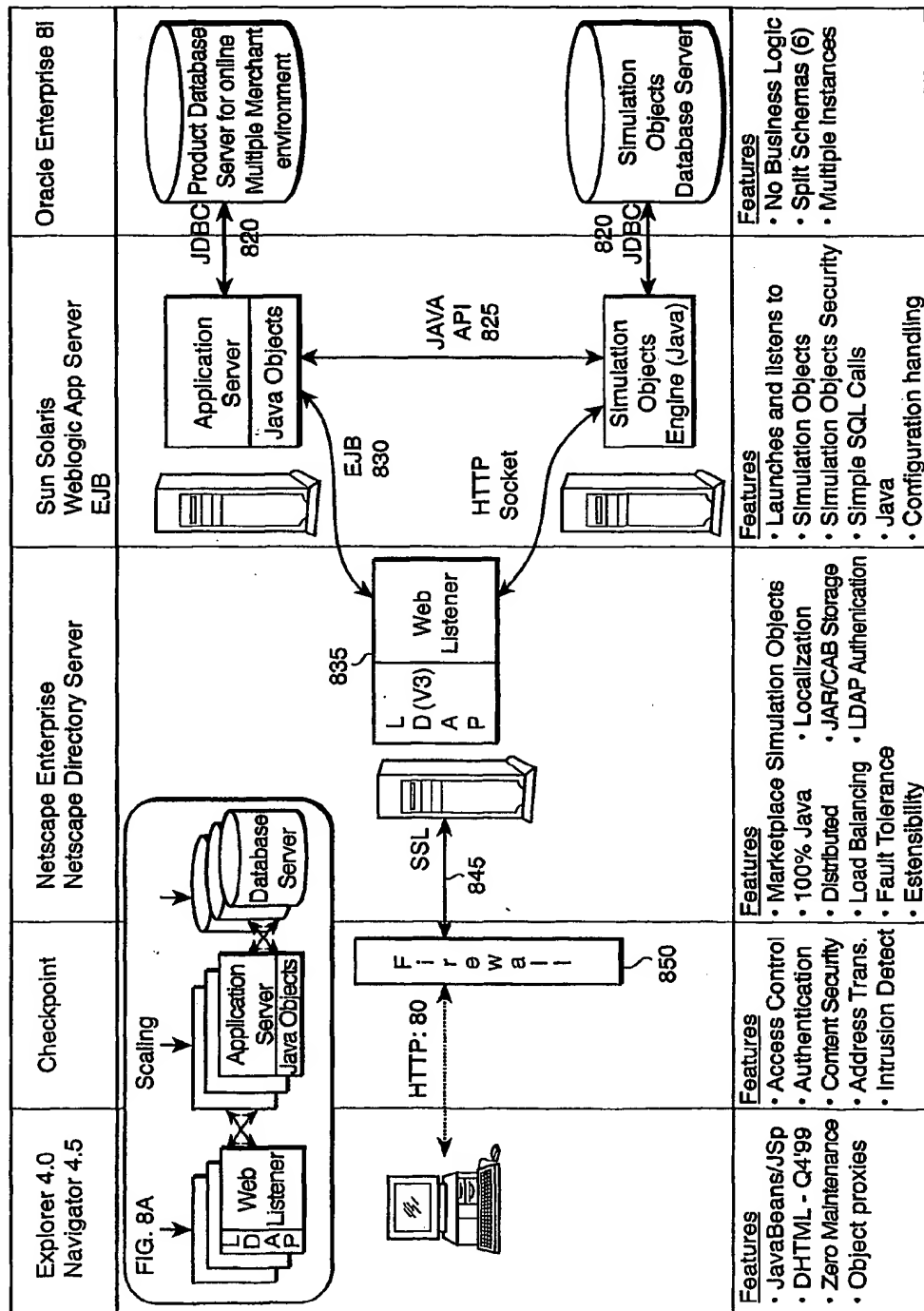


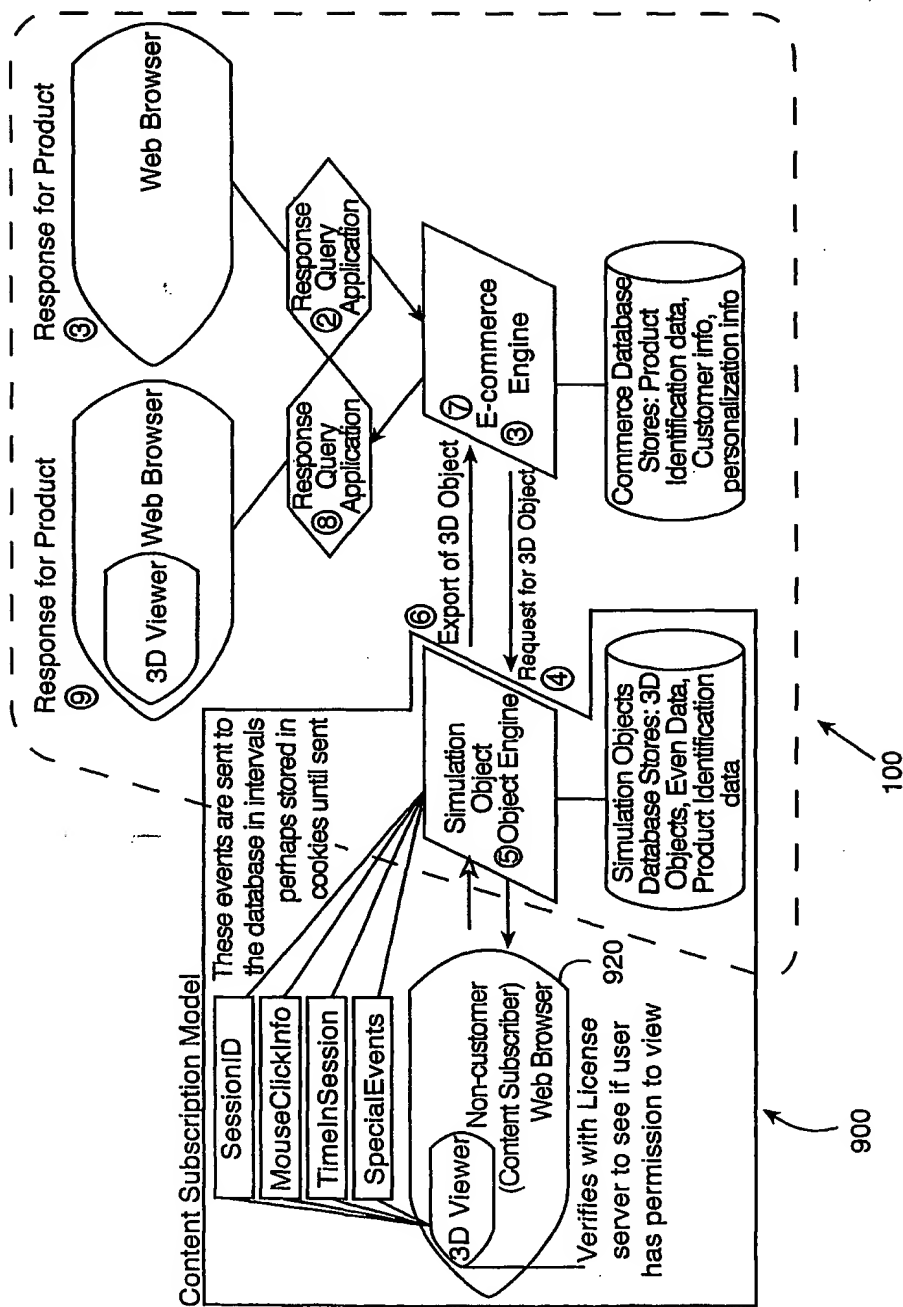
FIG. 6

8 / 19

FIG. 8



9 / 19





10 / 19

1000

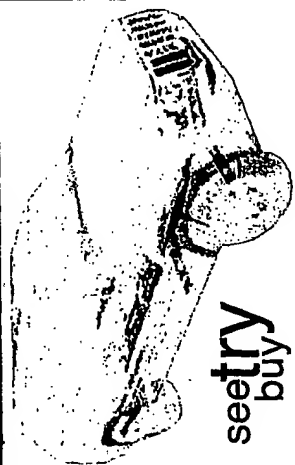
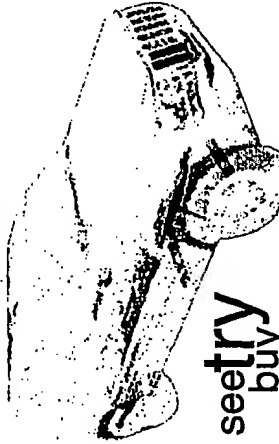
<b>REALITYBUY</b> <input type="text"/>		<a href="#">Contact us</a>   <a href="#">Site map</a>   <a href="#">Home</a>   <a href="#">see try buy</a>	
<input type="text"/>		<a href="#">About us</a>   <a href="#">Buyers</a>   <a href="#">Sellers</a>   <a href="#">Reality Objects™</a>   <a href="#">e*enabler™</a>   <a href="#">News</a>   <a href="#">Partners</a>   <a href="#">H4</a>	
<b>Account</b> Log in name: <input type="text"/> <b>Mak N. Monee</b> Password: <input type="text"/> <b>xxxxx</b> <input type="button" value="Forget password?"/>		<b>Headlines</b> Reality Buy.com Inc., Global "Business-to-Business" e-commerce based on fully interactive 3-D "See-Try-Buy" Technology December 1, 1999 RealityBuy.com announces that it is a new corporation located in Irvine, California. RealityBuy.com, Inc. (RealityBuy) plans to become the dominant global Business-to-Business E-commerce provider of fully interactive 3-D solutions utilized by sellers to better market their products to buyers via the Internet. RealityBuy plans to shift E-commerce from "flat" to "3-D" and from passive to fully interactive. RealityBuy has secured full rights to utilize the 3-D EON™ software technology of EON Reality, Inc.	
<input type="text"/>		<b>Today's feature</b> >>>> <b>Jeep Grand Cherokee 2000</b> 	
<b>Feature archives:</b> <input type="button" value="Archive Search"/>			

FIG. 10

11 / 19

FIG. 11

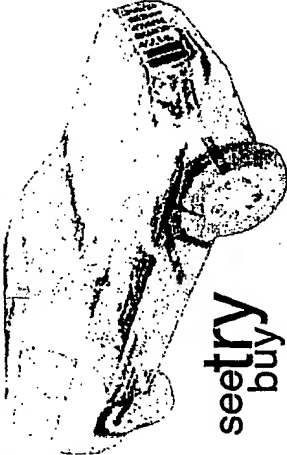
1105

<b>REALITYBUY</b> <a href="#">Countries</a>   <a href="#">About us</a>   <a href="#">Buyers</a>   <a href="#">Sellers</a>   <a href="#">Reality Objects™</a>   <a href="#">e*enabler™</a>   <a href="#">News</a>   <a href="#">Partners</a>   <a href="#">Home</a> <b>see try buy</b>	
<b>Account</b> Log in name: <input type="text" value="Mak N. Monee"/> Password: <input type="text" value="xxxx"/> Forget password? <input type="button" value="Search"/>	
<b>Headlines</b> RealityBuy.com Inc., Global "Business-to-Business" e-commerce based on fully interactive 3-D "See-Try-Buy" technology December 1, 1999 RealityBuy.com announces that it is a new corporation located in Irvine, California. RealityBuy.com, Inc. (RealityBuy) plans to become the dominant global Business-to-Business E-commerce provider of fully interactive 3-D solutions utilized by sellers to better market their products to buyers via the Internet. RealityBuy plans to shift E-commerce from "flat" to "3-D" and from passive to fully interactive. RealityBuy has secured full rights to utilize the 3-D EON™ software technology of EON Reality, Inc.	
<b>Todays feature</b> >>>> Jeep Grand Cherokee 2000  <b>see try buy</b>	
<b>Feature archives:</b> <input type="button" value="Archive Search"/>	

12 / 19

FIG. 12

1205

<p>REALITYBUY</p> <p>Countries <input type="text"/></p> <p>Account</p> <p>Log in name: <input type="text"/></p> <p>Mak N. Monee <input type="text"/></p> <p>Password: <input type="text"/></p> <p>xxxxx <input type="text"/></p> <p>Forget password? <input type="text"/></p> <p>Sell something</p> <p>Buy something</p> <p><input type="text"/></p> <p>Search</p>		<p>About us   Buyers   Sellers   Reality Objects™   e*enabler™   News   Partners   Home   see try buy</p>	
<p>Headlines</p> <p>Reality Buy.com Inc., Global "Business-to-Business" e-commerce based on fully interactive 3-D "See-Try-Buy" technology December 1, 1999</p> <p>RealityBuy.com announces that it is a new corporation located in Irvine, California.</p> <p>RealityBuy.com, Inc. (RealityBuy) plans to become the dominant global Business-to-Business E-commerce provider of fully interactive 3-D solutions utilized by sellers to better market their products to buyers via the Internet. RealityBuy plans to shift E-commerce from "flat" to "3-D" and from passive to fully interactive. RealityBuy has secured full rights to utilize the 3-D EON™ software technology of EON Reality, Inc.</p>		<p>Today's feature</p> <p>Feature archives:</p> <p>Archive Search</p>	
		<p>see try buy</p> 	

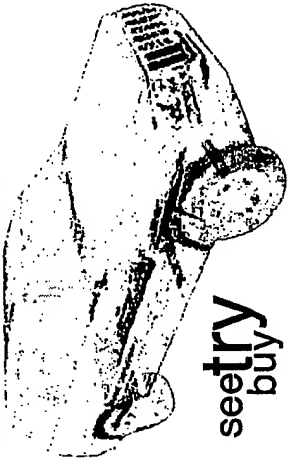
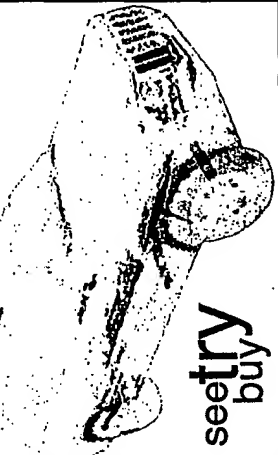
<p>REALITYBUY</p> <p>Countries <input type="button" value="v"/></p>		<p>Contact us   Site map   Home   see try buy</p>	
<p>About us   Buyers   Sellers   Reality Objects™   e*enabler™   News   Partners   <input type="button" value="H"/></p>		<p>Today's feature <input type="button" value="v"/> Jeep Grand Cherokee 2000</p>	
<p>Account</p> <p>Log in name: <input type="text" value="Mak N. Monee"/></p> <p>Password: <input type="text" value="xxxx"/></p> <p><input type="button" value="Forgot password?"/> <input type="button" value="Search"/></p>		<p>Headlines</p> <p>Reality Buy.com Inc., ... Global "Business-to-Business" e-commerce based on fully interactive 3-D "See-Try-Buy" Technology December 1, 1999 RealityBuy.com announces that it is a new corporation located in Irvine, California. RealityBuy.com, Inc. (RealityBuy) plans to become the dominant global Business-to-Business E-commerce provider of fully interactive 3-D solutions utilized by sellers to better market their products to buyers via the Internet. RealityBuy plans to shift E-commerce from "flat" to "3-D" and from passive to fully interactive. RealityBuy has secured full rights to utilize the 3-D EON™ software technology of EON Reality, Inc.</p>	
<p>Sell something Buy something</p> <p><input type="button" value="Search"/></p>		<p>Feature archives: <input type="button" value="Archive Search"/></p>	
		 <p>see try buy</p>	

FIG. 13

FIG. 14

1405      1410      1415

<b>REALITYBUY</b> <input type="text"/> Countries		About us   Buyers   Sellers   Reality Objects™   e*enabler™   News   Partners		Contact us   Site map   Home   <b>seetry buy</b>
<b>Account</b> Log in name: <input type="text"/> Mak N. Monee Password: <input type="text"/> xxxx Forget password?		<b>Automotive</b> Electronic Components Aerospace Construction Technology December 1, 1999 RealityBuy.com announces that it is a new corporation located in Irvine, California. RealityBuy.com, Inc. (RealityBuy) plans to become the dominant global Business-to-Business E-commerce provider of fully interactive 3-D solutions utilized by sellers to better market their products to buyers via the Internet. RealityBuy plans to shift E-commerce from "flat" to "3-D" and from passive to fully interactive. RealityBuy has secured full rights to utilize the 3-D EON™ software technology of EON Reality, Inc.		
<b>Headlines</b> Reality Buy.com Global "Busi e-commerce interactive 3- Technology December 1, 1999 RealityBuy.com announces that it is a new corporation located in Irvine, California. RealityBuy.com, Inc. (RealityBuy) plans to become the dominant global Business-to-Business E-commerce provider of fully interactive 3-D solutions utilized by sellers to better market their products to buyers via the Internet. RealityBuy plans to shift E-commerce from "flat" to "3-D" and from passive to fully interactive. RealityBuy has secured full rights to utilize the 3-D EON™ software technology of EON Reality, Inc.		<b>Vehicles</b> Aftermarket Parts Dealers Feature and Archive Bike Racks Car Covers Gas caps Ground fx Side Flare Wiper Blades Trailer hitch etc. etc. etc. etc. etc.		
<b>Log in name:</b> <input type="text"/> Mak N. Monee <b>Password:</b> <input type="text"/> xxxx <b>Forget password?</b> Sell something Buy something <input type="text"/> Search		<b>ep. Grand Cherokee 2000</b> 		



16 / 19

FIG. 16

REALITYBUY

Country:  Contact us | Site map | Home **see try buy**

About us | Buyers | Sellers | Reality Objects™ | e'enabler™ | News | Partners |

December 10, 1999 1:23pm

Press **try** key for menu options

**try**

0 = Reset world  
1 = Walk around  
2 = Tour underside  
V = Jeep Visible  
I = Jeep Invisible  
R = Start/Stop Rotation  
B = Bend muffler

Jeep Grand Cherokee 1999

Parts search:  \$199.00

Mufflers  \$125.00

**Description**

**Engines**  
4.0-liter, 195-hp V-6  
4.7-liter, 230-hp V-8

**Transmissions**  
4-speed automatic  
multi-speed automatic

**MPG (City/Highway)**  
16 / 21

**Towing Capacity**  
2,000 lbs.

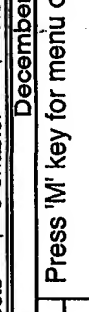

☐ Add to cart  
☒ Buy

Quantity	Product	Part #	Price ea.	Total
1	Muffler	002513497	\$125.00	\$34.800
2	Jeep Grnd. Chke.	20345587	\$10,000	\$2,000,000
3				
4				
5				
6				
7				

Account Order Tracking   Search

1610 1610 1610 1610

SUBSTITUTE SHEET (RULE 26)

REALITYBUY		Contact us   Site map   Home	
Countries	About us   Buyers   Sellers   Reality Objects™   e'enabler™   News   Partners	December 10, 1999 1:23pm	
see Jeep Grand Cherokee 1999	try	Press 'M' key for menu options	
 <p>\$212.16</p> <p>\$84.33</p>	<p>0 = Reset world</p> <p>1 = Walk around</p> <p>2 = Tour underside</p> <p>V = Jeep Visible</p> <p>I = Jeep Invisible</p> <p>R = Start/Stop Rotation</p> <p>B = Band muffler</p>		
Parts search: Mufflers	\$199.00	\$125.55	
<div> <div> Description Engines 4.0-liter, 195-hp V-6 4.7-liter, 230-hp V-8 Transmissions 4-speed automatic multi-speed automatic MPG (City/Highway) 16 / 21 Towing Capacity 2,000 lbs. </div> <div> Add to cart buy </div> </div>			
Quantity	Product	Part #	Price ea. Total
1 400	Muffler	002513497	\$87.00 \$34.800
2 200	Jeep Grnd. Chke.	20345587	\$10,000 \$2,000,000
3			
4			
5			
6			
7			
Units	\$0	View	Account   Order Tracking   Search

**SUBSTITUTE SHEET (RULE 26)**



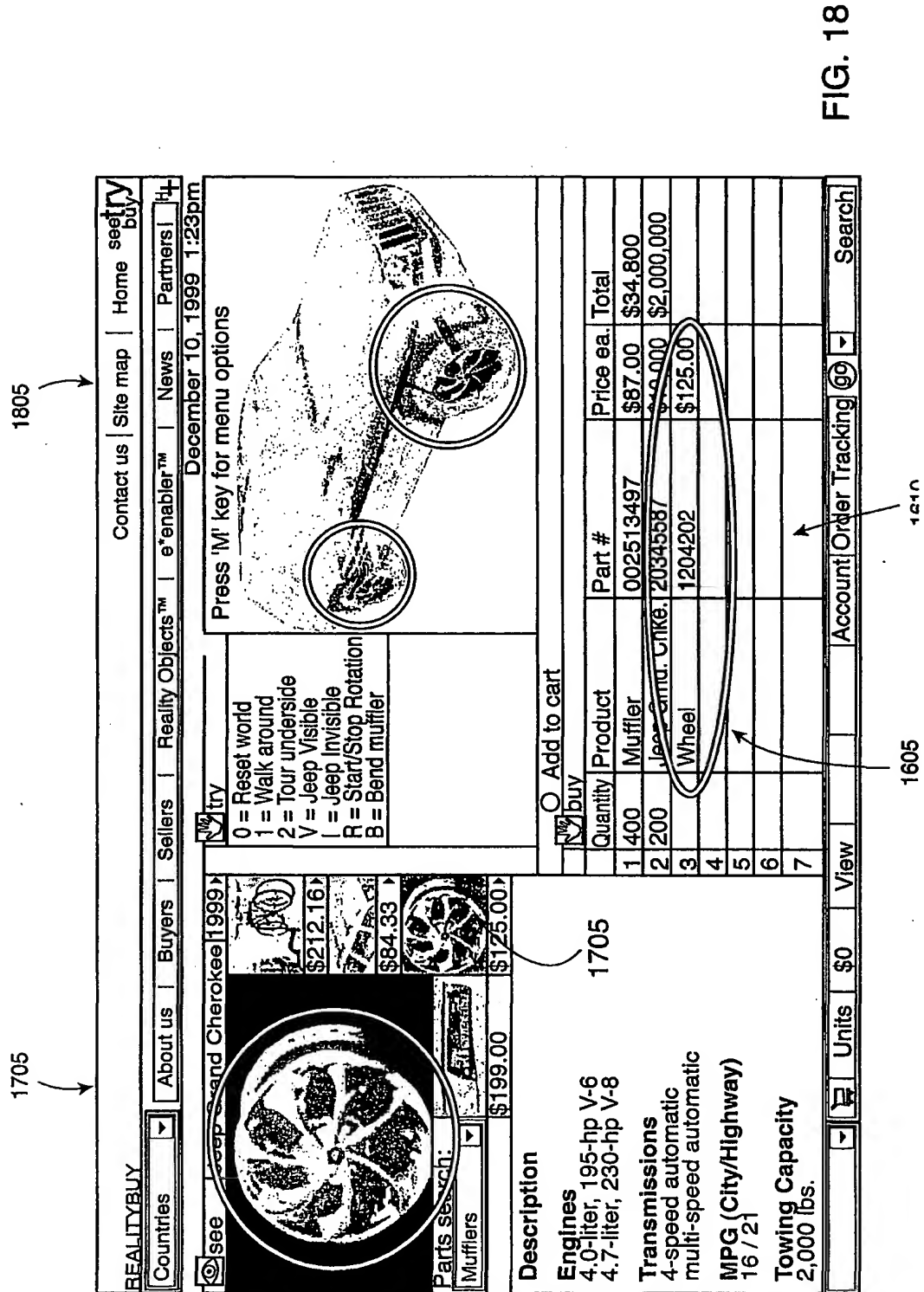


FIG. 18

<b>REALITYBUY</b>		Contact us   Site map   Home		see ty buy	
Countries	About us	Buyers	Sellers	Reality Objects™	e*enabler™
		News		Partners	
December 10, 1999 1:23pm					

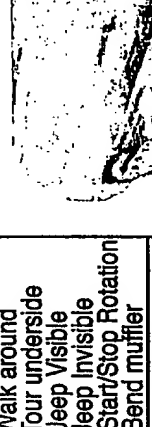
**See** Jeep Grand Cherokee ▶ 999 ▶  
 Bmw 525i  
 Bmw 720  
 Cadillac Caddy  
 Cadillac Deville  
 Ford Countour  
 Ford Expedition  
 Ford Explorer  
 Ford Mustang  
 Ford Torus  
 Lexus 400  
 Lexus 320  
 Lincoln Navigator

**Parts set** \$199.00  
**Mufflers** \$125.00

**try**

0 = Reset world  
 1 = Walk around  
 2 = Tour underside  
 V = Jeep Visible  
 I = Jeep Invisible  
 R = Start/Stop Rotation  
 B = Bend muffler



Press 'M' key for menu options

1505

**Description**

**Engines**  
 4.0-liter, 195-hp V-6  
 4.7-liter, 230-hp V-8

**Transmissions**  
 4-speed automatic  
 multi-speed automatic

**MPG (City/Highway)**  
 16 / 21

**Towing Capacity**  
 2,000 lbs.

<input type="radio"/> Add to cart		<input checked="" type="checkbox"/> Buy	
Quantity	Product	Part #	Price ea. Total
1 400	Muffler	002513497	\$87.00 \$34.800
2 200	Jeep Grmd. Chke.	20345587	\$10,000 \$2,000,000
3			
4			
5			
6			
7			

<
Units
\$0
View
Account/Order Tracking (go) >
Search

SUBSTITUTE SHEET (RULE 26)

## INTERNATIONAL SEARCH REPORT

 International application No.  
PCT/US01/10529

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/60

US CL : 705/27

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 705/26, 27

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EAST search

search terms: simulation simulate simulated internet purchase purchased purchases buy buys buying

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A, P	US 6,182,897 B1 (KNOWLES ET AL) 06 FEBRUARY 2001 (06/02/2001), see entire document.	1-16
A, P	US 6,130,898 A (KOSTRESKI ET AL) 10 OCTOBER 2000 (10/10/2000), see entire document.	1-16
A, P	US 6,083,267 A (MOTOMIYA ET AL) 04 JULY 2000 (04/07/2000), see entire document.	1-16
A, P	WO 01/01235 A1 (SINGHAL) 04 JANUARY 2001 (04/01/2001), see entire document.	1-16



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

02 JULY 2001

Date of mailing of the international search report

01 AUG 2001

 Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

MARK TREMBLAY

Telephone No. (703) 305-5176